Bruhat Bangalore Mahanagara Palike

Executive Engineer
Yelhanka Division

DETAILED ESTIMATE

NAME OF WORK: **Providing Asphalting to Putenahalli KHB colony in ward no-02 of Yelhanka subdivision**

PROJECT COST: **49.80 Lakhs**

Mecadez Core Technologies Private limited

Project Management and Consultancy Services

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BRUHAT BANAGLORE MAHANAGARA PALIKE

Executive Engineer-Yelhanka Division

Detailed Estimate

Name of Work: Providing Asphalting to Putenahalli KHB colony in ward no-02 of Yelhanka subdivision

			Estimate Amount :				4980000.00		
Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
				CIVIL WORKS					
1	Removing Slab of drain and Stacking **(Page No 25., I.No.5.32 of KPWD S.R 2015-16).**								
		Sqm							
	COVER SLAB								
	1st cross road								
	Ch: (0 - 58)	R/s	1	58	0.80		46.40		
	Ch: (0 - 58)	L/s	1	58	0.80		46.40		
	2nd cross road								
	Ch: (0 - 121)	R/s	1	121	0.80		96.80		
	Deuction for Cross roads (5.5)+(59-51)+(100-91) = 22.5		-1	22.5	0.80		-18.00		
	Ch: (0 - 121)	L/s	1	121	0.80		96.80		
	Deuction for Cross roads (59-51) = 8		-1	8	0.80		-6.40		
	3rd cross road								
	Ch: (0 - 118)	R/s	1	118	0.80		94.40		
	Ch: (0 - 118)	L/s	1	118	0.80		94.40		
	Deuction for Cross roads (58-50) = 8		-1	8	0.80		-6.40		
	2nd main								
	Ch: (0 - 127)	R/s	1	127	0.80		101.60		
	Ch: (0 - 127)	L/s	1	127	0.80		101.60		
	1st main								
	Ch: (0 - 157)	R/s	1	157	0.80		125.60		
	Ch: (0 - 35)	R/s	1	35	0.80		28.00		
	Ch: (0 - 157)	L/s	1	157	0.80		125.60		
	Ch: (0 - 35)	R/s	1	35	0.80		28.00		
	1st A main								
	Ch: (0 - 211)	R/s	1	211	0.80		168.80		
	Deuction for Cross roads (42-32) = 10		-1	10	0.80		-8.00		
	1st A main								
	Ch: (0 - 211)	L/s	1	211	0.80		168.80		
	Deuction for Cross roads (42-32) = 10		-1	10	0.80		-8.00		
							1276.40	**63.72**	**81332.21**
2	Refixing Slabs of drains and Pointing in C.M(1:3) **(Page No 25., I.No.5.33 of KPWD S.R 2015-16).**								
		Sqm							
	COVER SLAB								
	1st cross road								
	Ch: (0 - 58)	R/s	1	58	0.80		46.40		
	Ch: (0 - 58)	L/s	1	58	0.80		46.40		
	2nd cross road								
	Ch: (0 - 121)	R/s	1	121	0.80		96.80		
	Deuction for Cross roads (5.5)+(59-51)+(100-91) = 22.5		-1	22.5	0.80		-18.00		
	Ch: (0 - 121)	L/s	1	121	0.80		96.80		
	Deuction for Cross roads (59-51) = 8		-1	8	0.80		-6.40		

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	3rd cross road								
	Ch: (0 - 118)	R/s	1	118	0.80		94.40		
	Ch: (0 - 118)	L/s	1	118	0.80		94.40		
	Deuction for Cross roads (58-50) = 8		-1	8	0.80		-6.40		
	2nd main								
	Ch: (0 - 127)	R/s	1	127	0.80		101.60		
	Ch: (0 - 127)	L/s	1	127	0.80		101.60		
	1st main								
	Ch: (0 - 157)	R/s	1	157	0.80		125.60		
	Ch: (0 - 35)	R/s	1	35	0.80		28.00		
	Ch: (0 - 157)	L/s	1	157	0.80		125.60		
	Ch: (0 - 35)	R/s	1	35	0.80		28.00		
	1st A main								
	Ch: (0 - 211)	R/s	1	211	0.80		168.80		
	Deuction for Cross roads (42-32) = 10		-1	10	0.80		-8.00		
	1st A main								
	Ch: (0 - 211)	L/s	1	211	0.80		168.80		
	Deuction for Cross roads (42-32) = 10		-1	10	0.80		-8.00		
							1276.40		
	Deduction for damaged 25%						-319.10		
							957.30	**78.84**	**75473.53**
4	Providing **precast slab of 100 mm thick** including cost of all materials, labour, curing,transportation,loading ,unloading,etc.,complete as per the direction of engineer in charge- Data rate								
	For Damaged portion	**Sqm**							
							319.10		
							319.10	**1834.00**	**585229.40**
5	KSRRB 300-1. **Earthwork excavation by manual means** in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 1.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3 **(Page No141., I.No.19.1 of KPWD S.R 2015-16).**								
	Desilting	**Cum**							
	1st cross road								
	Ch. (0 - 58)	R/s	1	58	0.60	0.600	20.88		
	Ch. (0 - 58)	L/s	1	58	0.60	0.600	20.88		
	2nd cross road								
	Ch: (0 - 121)	R/s	1	121	0.60	0.600	43.56		
	Ch: (0 - 121)	L/s	1	121	0.60	0.600	43.56		
	3rd cross road								
	Ch: (0 - 118)	R/s	1	118	0.60	0.600	42.48		
	Ch: (0 - 118)	L/s	1	118	0.60	0.600	42.48		
	2nd main								
	Ch: (0 - 127)	R/s	1	127	0.60	0.600	45.72		
	Ch: (0 - 127)	L/s	1	127	0.60	0.600	45.72		
	1st main								
	Ch: (0 - 157)	R/s	1	157	0.60	0.600	56.52		
	Ch: (0 - 35)	R/s	1	35	0.60	0.600	12.60		
	Ch: (0 - 157)	L/s	1	157	0.60	0.600	56.52		
	Ch: (0 - 35)	R/s	1	35	0.60	0.600	12.60		
	1st A main								
	Ch: (0 - 211)	R/s	1	211	0.60	0.600	75.96		
	Deuction for Cross roads (42-32) = 10		-1	10	0.60	0.600	-3.60		

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Ch: (0 - 211)	L/s	1	211	0.60	0.600	75.96		
	Deuction for Cross roads (42-32) = 10		-1	10	0.60	0.600	-3.60		
							588.24	**168.76**	**99271.38**
8	KSRB 4-1.6 ; Providing and laying in position **plain cement concrete of mix 1:2:4** with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation,plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2 **(Page No 12., I.No.4.6 of KPWD S.R 2015-16).**								
		Cum							
	Packing Concrete								
	1st cross road								
	Ch: (0 - 58)	R/s	1	58	0.10	0.150	0.87		
	Ch: (0 - 58)	L/s	1	58	0.10	0.150	0.87		
	2nd cross road								
	Ch: (0 - 121)	R/s	1	121	0.10	0.150	1.82		
	Deuction for Cross roads (5.5)+(59-51)+(100-91) = 22.5		-1	22.5	0.10	0.150	-0.34		
	Ch: (0 - 121)	L/s	1	121	0.10	0.150	1.82		
	Deuction for Cross roads (59-51) = 8		-1	8	0.10	0.150	-0.12		
	3rd cross road								
	Ch: (0 - 118)	R/s	1	118	0.10	0.150	1.77		
	Ch: (0 - 118)	L/s	1	118	0.10	0.150	1.77		
	Deuction for Cross roads (58-50) = 8		-1	8	0.10	0.150	-0.12		
	2nd main								
	Ch: (0 - 127)	R/s	1	127	0.10	0.150	1.91		
	Ch: (0 - 127)	L/s	1	127	0.10	0.150	1.91		
	1st main								
	Ch: (0 - 157)	R/s	1	157	0.10	0.150	2.36		
	Ch: (0 - 35)	R/s	1	35	0.10	0.150	0.53		
	Ch: (0 - 157)	L/s	1	157	0.10	0.150	2.36		
	Ch: (0 - 35)	R/s	1	35	0.10	0.150	0.53		
	1st A main								
	Ch: (0 - 211)	R/s	1	211	0.10	0.150	3.17		
	Deuction for Cross roads (42-32) = 10		-1	10	0.10	0.150	-0.15		
	1st A main								
	Ch: (0 - 211)	L/s	1	211	0.10	0.150	3.17		
	Deuction for Cross roads (42-32) = 10		-1	10	0.10	0.150	-0.15		
							23.93	**5490.72**	**131406.66**

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amou in Rs
	ROAD WORKS								
9	KSRRB M300-14. **Excavation for roadwork** in all type of soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 **(Page No 142., I.No.19.14 of KPWD S.R 2015-16).**								
		Cum							
	Puttenehalli KHB Colony								
	1st main								
	Ch: (90 - 157)		1	67	5.00	0.425	142.38		
							142.38	**134.20**	**19106.73**
10	KSRRB 300-58. **Compaction of original ground** with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3 **(Page No 148., I.No.19.64 of KPWD S.R 2015-16).**								
		Cum							
	Puttenehalli KHB Colony								
	1st main								
	Ch: (90 - 157)		1	67	5.00		335.00		
							335.00	**4.86**	**1628.10**
11	KSRRB M400-6.1. Construction of **granular sub-base** by providing close graded material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications. A. Plant Mix Method Close graded granular sub-base material as per 400-1 For Grading- II Material **(Page No 154., I.No.20.4.2 of KPWD S.R 2015-16).**								
		Cum							
	Puttenehalli KHB Colony								
	1st main								
	Ch: (90 - 157)		1	67	5.00	0.150	50.25		
	Road cut portion								
	Anjeneya temple road								
	Ch: (0 - 45)		1	45	1.20	0.150	8.10		
							58.35	**1622.16**	**94653.04**
12	KSRRB M400-17. Providing, laying, spreading and compacting graded stones aggregate to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406 **(Page No 157., I.No.20.18 of KPWD S.R 2015-16).**								
		Cum							
	Puttenehalli KHB Colony								
	1st main								
	Ch: (90 - 157)		1	67	5.00	0.225	75.38		
							75.38	**1713.96**	**129189.74**
13	KSRRB M500-6. Providing and applying **primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WBM,WMM ,including clearing of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per Specifications. MORTH Specification No. 502 **(Page No 160., I.No.21.6 of KPWD S.R 2015-16).**								
		Sqm							

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Puttenehalli KHB Colony								
	1st main								
	Ch: (90 - 157)		1	67	5.00		335.00		
							335.00	**32.40**	**10854.00**
14	KSRRB 500-2. **Cleaning the existing black topped** surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH / Chapter 5**(Page No 160., I.No.21.2 of KPWD S.R 2015-16).**								
		Sqm							
	Puttenehalli KHB Colony								
	1st cross road								
	Ch: (0 - 30)		1	30	5.80		174.00		
	2nd cross road								
	Ch: (0 - 121)		1	121	6.00		726.00		
	3rd cross road								
	Ch: (0 - 118)		1	118	5.50		649.00		
	2nd main								
	Ch: (0 - 127)		1	127	6.50		825.50		
	1st A main								
	Ch: (0 - 211)		1	211	6.00		1266.00		
	1st main								
	Ch: (0 - 90)		1	90	5.00		450.00		
	Ch: (0 - 35)		1	35	5.50		192.50		
							4283.00	**3.24**	**13876.92**
##	KSRRB 500-7. Providing and applying **tack coat** using 80/100 grade Bitumen (VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm , heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH/Chapter 5 **(Page No 160., I.No.21.7 of KPWD S.R 2015-16).**								
		Sqm							
	Puttenehalli KHB Colony								
	1st cross road								
	Ch: (0 - 30)		1	30	5.80		174.00		
	2nd cross road								
	Ch: (0 - 121)		1	121	6.00		726.00		
	3rd cross road								
	Ch: (0 - 118)		1	118	5.50		649.00		
	2nd main								
	Ch: (0 - 127)		1	127	6.50		825.50		
	1st A main								
	Ch: (0 - 211)		1	211	6.00		1266.00		
	1st main								
	Ch: (0 - 157)		1	157	5.00		785.00		
	Ch: (0 - 35)		1	35	5.50		192.50		
							4618.00	**15.12**	**69824.16**
16	KSRRB M500- 15. Providing, laying **dense graded bituminous macadam** using 40/60 THP capacity H.M.P with Mechanical paver Gr-II(50mm to 75mm), crushed aggregates of specified grading premixed with 4.5% VG 30 grade bituminous binder and , transporting the hot mix to work site , laying to the required level and grade, rolling with wheeled , vibratory and tandeem rollers to achieve the desired density including all leads and lift cost of all materials, labour, HOM of machineries complete as per specifications MORTH Specification No.507 **(Page No 161., I.No.21.17.6 of KPWD S.R 2015-16).**								
		Cum							

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amou in Rs
	Puttenehalli KHB Colony								
	1st main								
	Ch: (90 - 157)		1	67	5.00	0.050	16.75		
	For profile correction								
	1st cross road								
	Ch: (0 - 30)		1	30	2.50	0.050	3.75		
	2nd cross road								
	Ch: (0 - 121)		1	121	2.50	0.050	15.13		
	3rd cross road								
	Ch: (0 - 118)		1	118	2.30	0.050	13.57		
	2nd main								
	Ch: (0 - 127)		1	127	2.50	0.050	15.88		
	1st A main								
	Ch: (0 - 211)		1	211	2.30	0.050	24.27		
	1st main								
	Ch: (0 - 90)		1	90	2.10	0.050	9.45		
	Ch: (0 - 35)		1	35	2.10	0.050	3.68		
							102.46	**7927.20**	**812220.91**
17	KSRRB M500- 15. Providing, laying **bituminousConcrete** using **40/60 THP** capacity H.M.P with Mechanical paver Gr-II(30mm to 45mm), crushed aggregates of specified grading premixed with 6% VG 30 grade bituminous binder and , transporting the hot mix to work site , laying to the required level and grade, rolling with wheeled , vibratory and tandeem rollers to achieve the desired density including all leads and lift cost of all materials, labour, HOM of machineries complete as per specifications MORTH Specification No.509 **(Page No 164., I.No.21.22.6 of KPWD S.R 2015-16).**								
		Cum							
	Puttenehalli KHB Colony								
	1st cross road								
	Ch: (0 - 30)		1	30	5.80	0.040	6.96		
	2nd cross road								
	Ch: (0 - 121)		1	121	6.00	0.040	29.04		
	3rd cross road								
	Ch: (0 - 118)		1	118	5.50	0.040	25.96		
	2nd main								
	Ch: (0 - 127)		1	127	6.50	0.040	33.02		
	1st A main								
	Ch: (0 - 211)		1	211	6.00	0.040	50.64		
	1st main								
	Ch: (0 - 157)		1	157	5.00	0.040	31.40		
	Ch: (0 - 35)		1	35	5.50	0.040	7.70		
							184.72	**9822.60**	**1814430.67**
8	KSRRB M600-1. Construction of **dry lean cement concrete mix M5** with OPC cement @160Kgs, with 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @ 0.58cum Sub- base over a prepared sub-grade with (coarse and fine aggregate conforming to IS: 383,) aggregate cement ratio not to exceed 15:1,aggregate gradation after blending to be as per Table 600-1, cement content not to be less than 160 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. MORTH Specification No. 601 **(Page No,-173, I.No.22.1 of KPWD S.R 2015-16)**								
		Cum							
	Road cut portion								
	Anjeneya temple road								

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Ch. (0 - 45)		1	45	1.20	0.100	5.40		
							5.40	**3900.96**	**21065.18**
9	Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 **design mix M30**(at 360 kg per cum coarse aggregate @ 0.69 cum and fine aggregate @0.46 cum) , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 caffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications.**(Page No 174., I.No.22.6.1 of KPWD S.R 2015-16).**								
		Cum							
	Anjeneya temple road								
	Ch. (0 - 45)		1	45	4.20	0.150	28.35		
	Prabhu bar and restaurant road								
	Ch. (0 - 36)		1	36	10.00	0.150	54.00		
	Ch. (36 - 50)		1	14	3.50	0.150	7.35		
							89.70	**5957.28**	**534368.02**
12	**Providing groove cutting** for Concrete pavement width of 5mm to 10mm and depth 80mm- 100mm including cost of cutting machine, generator & HOM of machinery, including cost of blade,coolant etc., including cleaning of groove & providing sand and hot bitumen fillars, and filler metal etc., including cost of conveyance of all materials, labour, lead and lift charges and all other incidental charges as per drawing and as per specifications.**(Page No 172., I.No.22.8 of KPWD S.R 2014-15).**								
		Rmt							
	LONGITUDINAL								
	Anjeneya temple road								
	Ch. (0 - 45)		1	45			45.00		
	Prabhu bar and restaurant road								
	Ch. (0 - 36)		1	36			36.00		
	Ch. (36 - 50)		1	14			14.00		
	LATERAL								
	Anjeneya temple road								
	Ch. (0 - 45)		15	4.20			63.00		
	Prabhu bar and restaurant road								
	Ch. (0 - 36)		12	10.00			120.00		
	Ch. (36 - 50)		5	3.50			17.50		
							295.50	**124.20**	**36701.10**

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amou in Rs
	ROAD FURNITURES								
18	KSRRB M800-13. Providing and laying of **hot applied thermoplastic compound** 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 **(Page No 181., I.No.24.15 of KPWD S.R 2015-16).**								
		Sqm							
	Puttenehalli KHB Colony								
	1st cross road								
	Ch: (0 - 30)		2	30	0.15		9.00		
	2nd cross road								
	Ch: (0 - 121)		2	121	0.15		36.30		
	3rd cross road								
	Ch: (0 - 118)		2	118	0.15		35.40		
	2nd main								
	Ch: (0 - 127)		2	127	0.15		38.10		
	1st A main								
	Ch: (0 - 211)		2	211	0.15		63.30		
	1st main								
	Ch: (0 - 157)		2	157	0.15		47.10		
	Ch: (0 - 35)		2	35	0.15		10.50		
							239.70	**473.04**	**113387.69**
	Sub Total								**4644019.47**
19	Cost towards Design Report and Detailed Estimate,PMC/Third party								**46440.19**
20	**Cost of Plastic@ 8% of bitumen qty for BC**	**Kg**	1	2083.64				**27.00**	**56258.32**
21	Cost towards DLP								**232200.97**
22	Misellenous and other charges								**1081.07**
	Grand Total								**4980000.00**

Certificate:-

1. That the workspot inspected by me and found work is necessary.
2. That the area comes with in the Bruhat Bangalore Mahanagara Palike Limits.
3. That the rates are adopted based on the PWD SR of 2015-16
4. That the provisions made in the estimate are necessary and quite essential.

Consultant:

For M/s MECADEZ CORE TECHNOLOGIES PVT LTD

Asst. Engineer
Ward No-02
BBMP

AEE
Yelhanka Sub Division
BBMP

Executive Engineer
Yelhanka Division
BBMP